

XXVIII. *The Effects of the Hyoscyamus albus, or white Henbane; in a Letter to Dr. John Pringle, F. R. S. from Dr. John Stedman, late Surgeon-Major to the Regiment of the Royal Grey Dragoons.*

S I R,

Edinburgh, Octob. 2, 1750.

Read May 16. 1751. **I**N the month of August 1748, whilst the Greys were cantoon'd in the vil-

lage of Vucht near Boisseduc in Dutch Brabant, five men and two women of that regiment having eaten of the leaves of the *hyoscyamus albus*, shred and boiled in broth, were soon after seized with a giddiness and stupor, as if drunk. I saw them about three hours after having eat of it; and then three of the men were become quite insensible, did not know their comrades, talk'd incoherently, and were in as high a delirium, as people in the rage of a fever. All of them had low irregular pulses, flaver'd, and frequently chang'd colour: their eyes look'd fiery, and they catch'd at whatever lay next them, calling out, that it was going to fall. They complain'd of their legs being powerless. I mix'd what ipecacuana I had with me in warm water, and made them drink it; and afterwards threw in as much warm water and oil, as I could prevail with them to swallow. Those, who were not insensible, vomited freely, and were relieved by it. Two of the three affected with delirium, tho' they drank great quantities, did not vomit, but had profuse sweats, and pass'd plenty of urine,

urine, by which they were likewise somewhat relieved. The third of these was obstinate, nor could be prevail'd upon to do any thing. The symptoms with him continued longer, and were more violent. He was so restless, that, notwithstanding he could not walk, two of his comrades were not able to keep him in a chair. Next morning they had no other complaint than people commonly have after great drinking; but afterwards (tho' the danger seem'd over) some of them complain'd of feebleness and a weight at their stomachs; others, of gripes, stitches, headach; and all of them were vertiginous at times. These complaints continued above a month after the accident. One of the women had her hands stiff and swell'd; whether from the action of the vomit, or the force of the poison, I know not. The man, who pull'd these leaves in mistake for another plant, said, that from the nearest conjecture he could make, there might be from fifteen to twenty leaves, boil'd in about ten quarts of water. They did not eat one half of that quantity, and the poison began to discover itself with some of them in half an hour. This seem'd to be the *hyoscyamus major albus* of Caspar Bauhinus. It is easily known by its large dusky bell-flower; but if not in the flower, the remarkable noisome smell of the leaf, somewhat narcotic, if once known, will ever after discover it.

Some time before this accident, we had a proof of the effect of the yew-tree upon some of our horses: they were put into an orchard, where they cropp'd the branches of these trees, and about four hours after, without any previous symptom of disorder, dropp'd down, and after a struggle of a minute or

two died. This was probably about the time, that the juice enter'd the blood.

Remarks by Mr. William Watfon, F. R. S.

Upon reading the above paper, Mr. Watfon observ'd, that the effects therein mentioned could not arise from the *hyoscyamus albus*, or white henbane, as Dr. Stedman imagines; that plant, from the concurrent testimony of the best botanical writers, not being found so far north as Brabant: but the mischief was done by the *hyoscyamus niger*, or black henbane, which grows plentifully there, as well as almost all over Europe in uncultivated places, and by the sides of roads. The white on the contrary is sown in gardens, and not found spontaneous in higher latitudes than the southern parts of France.

Dr. Stedman's description demonstrates likewise the above plant to be the *hyoscyamus niger*, as he says, that "it is known by its dusky bell-flower." The flower of black henbane is of that hue, being of a yellow colour interspersed with veins of purple; whereas the flower of the white henbane is of a pale-yellow colour.

This error arises from the improper denomination imposed upon many plants by the ancients, and which has been preserved even since the revival of letters; which, to one not very well acquainted with botany, is liable to mislead. Thus, in the case before us, the leaves of the black henbane are very little less white than those of the white; but this denomination took its rise from the different colour of their seeds. In such cases therefore, without
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being well acquainted with the specific difference of each plant, before it ripens its seed, it is not a little difficult to distinguish them one from the other. This specific difference will be best furnished by the leaves. Thus in the henbane, the leaves of the white are placed upon long footstalks; those of the black have none, but the lower extremity of the leaf surrounds the stalk.

XXIX. *The best Proportions for Steam-Engine Cylinders, of a given Content, consider'd;*
by Francis Blake, Esq; F. R. S.

Read May 23. 1751. **T**HE fire-engine, or (to term it more properly) the steam-engine, for draining of mines, is a master-piece of machinery, a very capital contrivance in the works of art, and meriting our attention for further improvements. This is universally allowed, as well upon account of the theory it is founded on, as its usefulness in practice. And is it arriv'd then at the last degree of perfection, that we appear at a stand? I think not. The prodigious vessel of water to be kept always boiling, when only an inconsiderable part of it is employ'd in the work, favours too little of the frugality of nature, which we ought ever to imitate. But waving that now, what I would inquire into here, and endeavour to regulate, is, the cylinder's proportion of the altitude and base; which hath not, as I know of, been hitherto noticed.